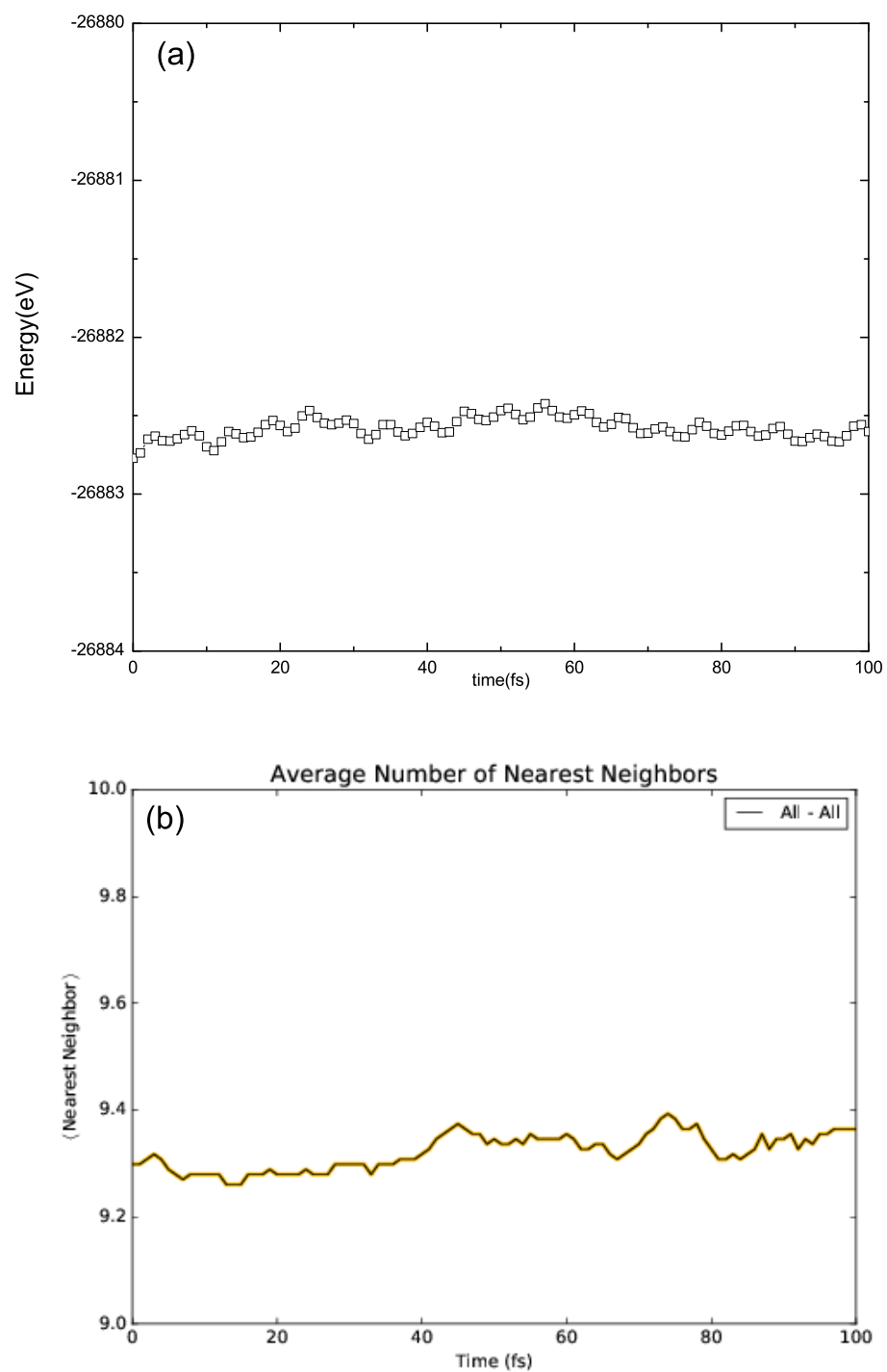
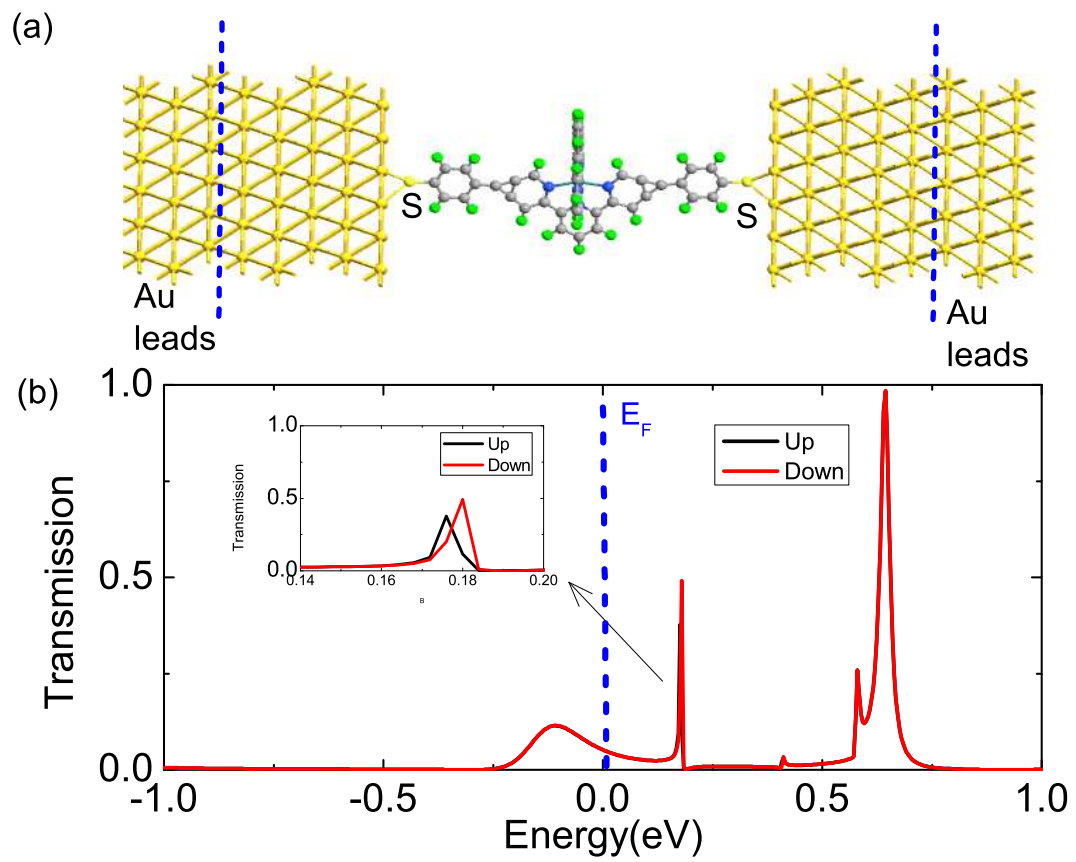


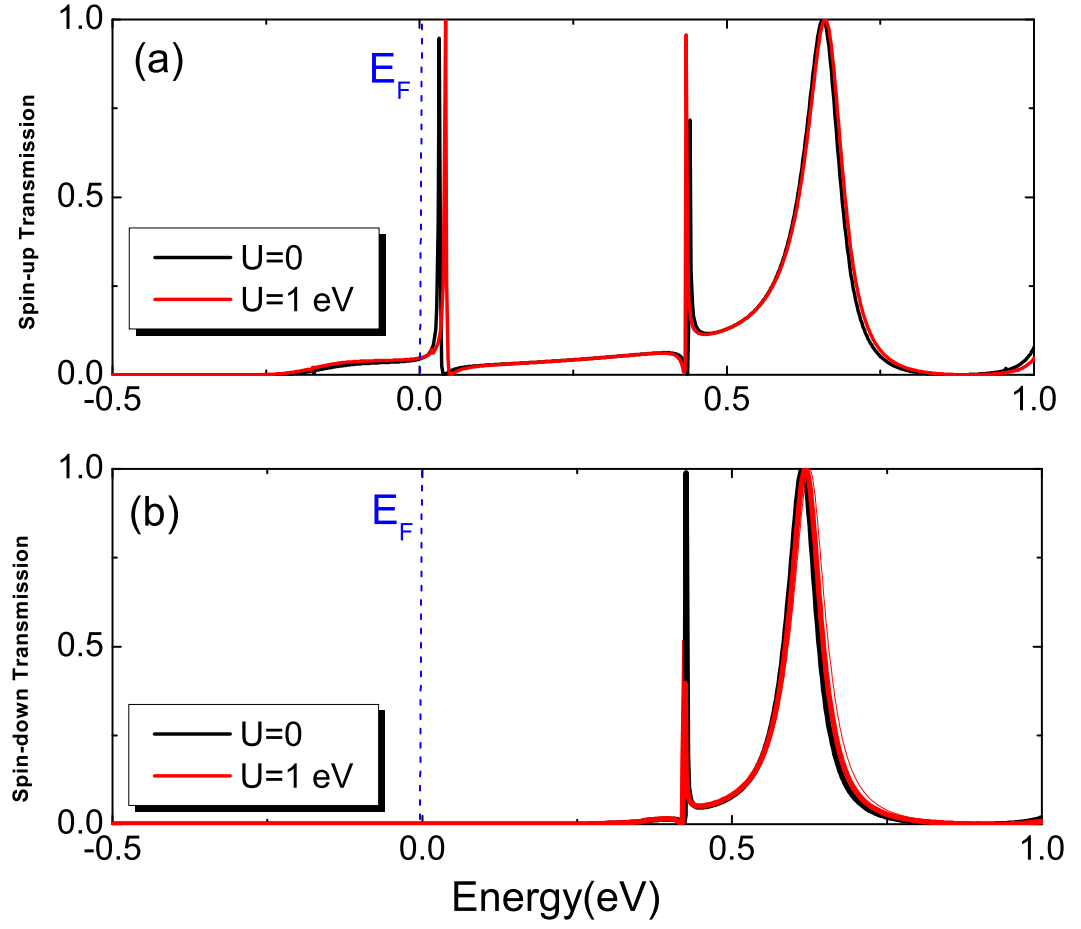
Supplementary



(Color online) Fig.s1: (a) The total energy of the Ru-complex molecular device versus the time. (b) The average number of nearest neighbors versus the time.



(Color online) Fig.s2 (a) The molecular devices in the present of gold electrodes, where the central molecule is attached to gold electrodes via S atoms. (b) Spin-dependent transmission versus the energy.



(Color online) Fig.s3 (a) The spin-up and (b) spin-down transmission functions versus the energy in the presence of the Hubbard $U(=1.0$ eV)